

**MINUTE ITEM**  
This Calendar Item No. C111 was approved as  
Minute Item No. 111 by the California State Lands  
Commission by a vote of 3 to 0 at its  
4-24-01 meeting.

**CALENDAR ITEM**  
**C111**

A 80  
S 37

04/24/01  
PRC 7621.0  
J. Adams

**CONSIDER APPROVAL OF THE AMENDMENT AND RESTATEMENT  
OF STATE GEOTHERMAL RESOURCES LEASE NO. PRC 7621.0,  
SALTON SEA GEOTHERMAL FIELD,  
IMPERIAL COUNTY**

**LESSEE:**

Magma Power Company  
Attn.: Mr. Vincent J. Signorotti  
551 West Main Street  
Brawley, CA 92227

**AREA, LAND TYPE, AND LOCATION:**

Approximately 615 acres of State land situated within the Hazard Tract of the Imperial Wildlife Management Area on the southeastern shore of the Salton Sea, California.

**BACKGROUND:**

State Geothermal Resources Lease No. PRC 7621.0 was issued to Magma Power Company (Magma) in 1992. The lease covers 80 acres of State land under the jurisdiction of the California Department of Fish and Game (CDFG). Adjacent to the lease is 535 acres of land also under CDFG's jurisdiction. The 615 acres of land comprise the "Hazard Tract" of the Imperial Wildlife Management Area, administered by the U.S. Fish and Wildlife Service.

The Hazard Tract and surrounding private lands overlie the Salton Sea geothermal field. The developed portion of the field consists of about 4,700 acres divided into four operating "units". Each unit is composed of several leases whose geothermal production is pooled to supply one or more electrical power generating facilities. Royalties are paid to the various lessors within each unit based on their respective acreage share of that unit. The 80-acre parcel presently leased to Magma under Lease No. PRC 7621.0 has been combined

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with 800 acres of privately-owned lands into a geothermal unit, identified as the "Elmore Unit", that supplies a 40-Megawatt (Mw) power generating facility.

Magma conducts its geothermal operations at the Salton Sea field directly and in cooperation with several affiliated entities. Magma and/or its affiliates hold substantially all of the leases at the Salton Sea field, and own all nine power generating facilities. Magma and its affiliates acquired the leaseholds and facilities of all competing geothermal companies in 1992 and 1993. The nine power generating facilities have a combined capacity of 330 Mw, enough to supply about 330,000 homes. Most of the power generated from these facilities has been sold to Southern California Edison. A Magma affiliate also owns a recently completed mineral processing facility, the first of its kind in the world that recovers metallic zinc from the geothermal fluids.

Geological and geophysical evidence indicates that the Salton Sea field extends beyond the currently developed area. Magma hopes to develop this untapped part of the field and construct up to 300 Mw of new facilities, doubling the field's generating capacity. Magma and its affiliates hold substantially all of the lands in the area under lease except for the 535-acre unleased portion of the Hazard Tract.

Magma has requested that Lease No. PRC 7621.0 be amended and restated in order to add the 535 acres (Added Land) as shown on Exhibit A, attached hereto, provide more flexibility with respect to unitization and certain related rights, and restructure the basis for royalty. Magma has represented that such changes are designed to allow optimal development and management of the geothermal resources, and to enhance Magma's ability to secure financing to construct new power generating or mineral processing facilities.

**TERM OF LEASE:**

The amended lease would be issued for a primary term of ten (10) years and so long thereafter as geothermal resources are being produced or utilized in commercial quantities from the leased lands, or lands unitized therewith. Magma is not obligated under the amended lease to drill any wells or construct any new power generating facilities. However, the State reserves the right to terminate the lease as to the Added Land if within five (5) years Magma has not completed construction of foundations for not less than 49 Mw of new power generating facilities that will utilize geothermal resources from the Hazard Tract or lands

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unitized therewith, or within ten (10) years Magma has not commenced commercial operation of the new power generating facilities.

**NEGOTIATED LEASE:**

Section 6919 of the Public Resources Code provides that geothermal leases may be issued through negotiation, rather than through competitive bid, when certain criteria are met. The unleased portion of the Hazard Tract is considered unsuitable for competitive bidding for the following reasons:

- (1) CDFG presently utilizes the surface of the property for wildlife protection and management and favors development of the geothermal resource from surface facilities located in areas outside of the parcel;
- (2) the State owns a fractional interest only in 240 acres of the lands to be covered by the lease;
- (3) Magma and its affiliates own or have under lease the remaining mineral interest in the 240 acre tract and control available offsite surface locations from which exploration and development of the State lands may be conducted; and
- (4) consolidated management and operation will promote the orderly development and conservation of the resource.

A negotiated lease is therefore considered to be in the best interests of the State.

**NO SURFACE USE:**

Section 6924 of the Public Resources Code provides that where the surface of State-owned lands is under the jurisdiction of another State agency, leases may be issued by the Commission only with the consent of and subject to reasonable terms and conditions as may be prescribed by that other agency. Commission staff has worked with the CDFG to ensure that terms of the amended lease provide adequate protection to the Hazard Tract's wildlife management activities. The existing lease prohibits any use of the surface to a depth of 500 feet. The amended lease will extend this restriction to the entire 615 acres of the Hazard

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Tract. Geothermal resources beneath the Hazard Tract therefore must be developed by directional drilling from adjacent private lands. The CDFG has reviewed the terms of the amended lease. Staff anticipate receipt of a letter prior to the Commission's meeting reflecting the consent of CDFG to the terms of the amended lease.

**UNITIZATION:**

Section 6923 of the Public Resources Code authorizes the lessees of any geothermal resources area to unite to form cooperative or unit plans of development or operation for the purpose of conserving the natural resources of the area. The Code section also provides that the State may change the drilling and production requirements of its leases to secure the proper protection of the interests of the State. Magma has expressed its intent to combine its leaseholds and mineral interests in the vicinity into geothermal units so that development and operations may be carried out in a coordinated and efficient manner. The California Division of Oil, Gas and Geothermal Resources (CDOGGR) has advised Commission staff that cooperative or unitized development of geothermal resources may be undertaken without the approval of the State Oil and Gas Supervisor. Magma has requested the prior approval of the Commission to include the Hazard Tract acreage into a unit or units whose precise size and configuration will be determined at a later time. Magma has also requested changes in certain lease requirements based on the premise of unitization and the representation that there will be no surface occupancy on the Hazard Tract. Commission staff believes the changes incorporated into the amended lease properly protect the interests of the State.

The amended lease will permit Magma, without the further consent of the Commission, to combine the Hazard Tract acreage, including that portion presently under lease, with approximately 6,000 acres of adjacent and nearby private leaseholds to be selected by Magma into a new large geothermal unit, referred to as the "Alamo Unit". Magma's stated preference for new development is to form this large unit, and construct new power generating facilities totaling up to 300 Mw, and possibly construct new facilities to extract and process minerals from the geothermal fluids. However, because it may be necessary to construct new power generating facilities in increments of between 49 and 130 Mw, the amended lease will also permit Magma to combine leaseholds into smaller units of approximately 2,500 acres to allow for incremental development. The amended lease provides that if Magma forms a

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large unit of some 6,500 acres, then all of the Hazard Tract acreage would be included or treated, for calculation of royalty, as if it were included. If Magma forms smaller units, and chooses to include a portion of the Hazard Tract acreage, then at least one-half of the Hazard Tract acreage would be included in the unit or treated as such. Pending commercial operation of a new power generating facility within the Alamo Unit, the amended lease provides for the State to continue receiving royalty from the Elmore Unit in which it currently participates.

Commission staff has reviewed geological and geophysical data pertaining to the geothermal resource potential beneath the Hazard Tract acreage and the surrounding lands, and finds: 1) that adequate technical justification exists to warrant the participation of the leased lands in the proposed Alamo Unit, or such smaller units as provided for in the amended lease, and 2) that such inclusion will be fair, just and equitable to the State. Commission staff further believes that the unitization scenarios authorized under the amended lease, if implemented, would protect the resource from unreasonable waste and properly conserve the natural resources of the area.

The Hazard Tract's share of the total geothermal resources produced from any unit in which it participates will be determined by the net mineral acres of the State contributed or credited to the unit, divided by the total number of acres credited to the unit. Although Magma would have the flexibility under the amended lease to create larger units for operational purposes, for the purpose of calculating and allocating the State's share of unit production, the Alamo unit will be treated as not exceeding 6500 gross acres and the smaller unit (s) as not exceeding 2500 gross acres each. Of the 615 surface acres comprising the Hazard Tract, the State owns 100 percent (100%) of the minerals in 375 acres, 50 percent (50%) of the minerals in 160 acres, and 35 percent (35%) of the minerals in 80 acres. This equates to 483 net acres of mineral ownership.

**RENTAL AND ROYALTY:**

The amended lease provides for rental to be paid at the rate of \$25.00 per acre per year for the 535 acres being added, until such time as the State begins receiving royalty attributable to the Added Land, and thereafter at a rate of \$2.00 per acre per year. The 80-acre parcel presently under lease is currently receiving royalty from its participation in the Elmore Unit and will continue to receive rental in the amount of \$2.00 per acre per year.

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The amended lease provides for a ten percent (10%) royalty to be paid for geothermal resources utilized to generate electrical power, with the value of the geothermal resources being twenty-five percent (25%) of the gross income received from sale of the electrical power generated from those resources. For the recovery of minerals from the geothermal fluids, the amended lease provides for a royalty of two percent (2%) of the minerals' gross value in the first marketable form.

The original lease differs from the proposed amendment primarily in the basis for the value of the geothermal resources used to generate electricity. In the original lease, the basis was a percentage of the energy payment associated with the power sales agreement between Magma and Southern California Edison. That power sales agreement also includes a separate capacity payment. New generation developed by Magma will not be sold under this type of agreement. The proposed lease amendment provides that the value of the geothermal resource would be based on a percentage of the gross income received from various sources, including sales of the electrical power through bilateral contracts, sales to a power exchange, sales to a power marketer, sales to the State of California or any other governmental agency, green power bonuses paid by the power purchaser, and payments received under Reliability Must-Run and Ancillary Services contracts with the California Independent System Operator. However, revenues based on, or provided as incentives for, the construction of new or additional generating capacity or the drilling of wells, and tax credits or deductions allowed by Federal, State, or local agencies would be excluded from gross income for the purposes of calculating royalty.

**ASSIGNMENT, ENCUMBRANCING, OVERSIGHT:**

Magma has requested certain other lease terms be modified in order to provide additional flexibility and aid in Magma's subsequent development activities involving the Hazard Tract lands. The amended lease authorizes Magma to convey interests in the lease to seven affiliated entities in the form of "geothermal easements", which are *profits a prendre* in the nature of a sublease. However, Magma will remain the lessee under the amended lease, and will retain primary responsibility for all obligations thereunder. The amended lease provides the Commission consent to the granting of the geothermal easements to Elmore, LP; Leathers, LP; CalEnergy Minerals II, LLC; CE Minerals Development LLC; CE Geothermal, LLC; CE Resource, LLC; and CE Power, LLC. The first two entities

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are California limited partnerships; the others are Delaware limited liability companies. The amended lease also authorizes the encumbrance of the lease for construction and permanent financing for any new plants, additional generating facilities and mineral processing facilities constructed by Lessee or its geothermal easement grantees in Salton Sea area.

The amended lease also relinquishes the State's traditional role with respect to subsequent well approvals and subsidence oversight. However, Commission staff believes that the existing regulatory jurisdiction of other governmental agencies, specifically the CDOGGR and the County of Imperial, provide adequate protection to the State in these matters, particularly given that the Hazard Tract lands are to be part of a larger geothermal unit, and that the lessee will not have rights of entry upon the surface of the Hazard Tract.

**OTHER TERMS:**

The amended lease further provides:

- (1) for reimbursement of the State's actual costs, up to a maximum of Five Thousand Dollars (\$5,000) per year, adjusted every five years based on the change in the Consumer Price Index, for periodic inspection of the leased lands;
- (2) that Magma will increase the amount of the performance bond furnished to the State from its existing level of Fifty Thousand Dollars (\$50,000) to One Hundred Thousand Dollars (\$100,000), adjusted every five years based on the change in the Consumer Price Index, and
- (3) that Magma will secure liability insurance naming both the State and the CDFG as additional insured, with coverage of at least Two Million Dollars (\$2,000,000) per occurrence and a general aggregate limit of at least Five Million Dollars (\$5,000,000).

**STATUTORY AND OTHER REFERENCES:**

- A. Public Resources Code: Division 6, Parts 1 and 2; and Division 13.
- B. California Code of Regulations: Title 2, Division 3; and Title 14.

**OTHER PERTINENT INFORMATION:**

1. Imperial County, as the California Environmental Quality Act (CEQA) Lead

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Agency, prepared and certified in December 1981 the Salton Sea Anomaly (SSA) Master Environmental Impact Report (MEIR), State Clearinghouse Number 80102409. The area designated within the MEIR encompasses 111,444 acres within Imperial County's Geothermal Overlay Zone of its General Plan. The lands covered by the proposed amendment of Lease No. PRC 7621.0 are included within the above acreage.

2. The project description within the MEIR projected the development of 1,400 Mw of generating capacity within the SSA and the MEIR included mitigation measures for each potentially significant environmental impact identified for such capacity. Generating capacity from geothermal production within the SSA is currently about 330 Mw, well below the environmental thresholds discussed in the MEIR. Such would remain the case with the addition of the potential 300 Mw of new generating capacity that could be developed by Magma. Any development project or projects proposed by Magma will require the issuance of a Conditional Use Permit from Imperial County. Such consideration will require the preparation of additional environmental documentation under the provisions of the CEQA. The functional equivalent to a CEQA analysis is also a requirement of the California Energy Commission's licensing of any power generating facilities 50 Mw and larger. The State and the CDFG would have the opportunity to participate in such environmental processes and in subsequent permit considerations by Imperial County and the California Energy Commission.
3. Imperial County, by letter of October 5, 2000, indicates that the MEIR "is still the most comprehensive environmental document on geothermal development prepared to date in Imperial County for the Salton Sea area and should be utilized by any federal or state environmental agency for development of any specific permitting, mitigation and monitoring procedures." Commission staff has reviewed such document in the context of the proposed amendment of Lease No. PRC 7621.0 to include the added portions of the Hazard Tract of the Imperial Wildlife Management Area.

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4. Findings were made by Imperial County in conformance with the State CEQA Guidelines (Title 14, California Code of Regulations, sections 15091 and 15096) and are available in the Sacramento office of the Commission.
5. A Statement of Overriding Considerations was adopted by Imperial County in conformance with the State CEQA Guidelines (Title 14, California Code of Regulations, section 15093) identifying, among others, the following as potentially unavoidable adverse impacts that could not be mitigated to a less than significant level: Geology and Soils (ground shaking or displacement due to seismic activity, subsidence); Hydrology (degradation of surface and/or ground water quality); Biological Resources (loss of agricultural and habitat-type vegetation, potential disruption of biological species including the Yuma Clapper Rail and the Black Rail). The Statement of Overriding Considerations is also available in the Sacramento office of the Commission.

**EXHIBITS:**

- A. Land Description (Original and Added Land)
- B. Location Map

**PERMIT STREAMLINING ACT DEADLINE:**

May 11, 2001

**RECOMMENDED ACTION:**

IT IS RECOMMENDED THAT THE COMMISSION:

**CEQA FINDINGS:**

FIND THAT THE SALTON SEA ANOMALY MASTER ENVIRONMENTAL IMPACT REPORT FOR GEOTHERMAL EXPLORATION AND DEVELOPMENT ACTIVITIES WAS PREPARED AND CERTIFIED BY IMPERIAL COUNTY AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN;

ADOPT THE FINDINGS MADE BY IMPERIAL COUNTY IN CONFORMANCE WITH TITLE 14, CALIFORNIA CODE OF REGULATIONS, SECTIONS 15901 AND 15096 (h), AS AVAILABLE IN THE SACRAMENTO OFFICE OF THE COMMISSION;

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ADOPT THE STATEMENT OF OVERRIDING CONSIDERATIONS MADE BY IMPERIAL COUNTY IN CONFORMANCE WITH TITLE 14, CALIFORNIA CODE OF REGULATIONS, SECTION 15093, AS AVAILABLE IN THE SACRAMENTO OFFICE OF THE COMMISSION;

**OTHER FINDINGS:**

FIND THAT A NEGOTIATED LEASE PURSUANT TO PUBLIC RESOURCES CODE SECTION 6919 IS WARRANTED AND IN THE BEST INTERESTS OF THE STATE;

FIND THAT THE DEVELOPMENT OF GEOTHERMAL RESOURCES UNDER A COOPERATIVE OR UNIT AGREEMENT, AS AUTHORIZED IN THE AMENDED AND RESTATED LEASE, WILL RESULT IN THE CONSERVATION OF THE NATURAL RESOURCES AND SECURE THE PROPER PROTECTION OF THE INTERESTS OF THE STATE.

**AUTHORIZATION:**

AUTHORIZE THE AMENDMENT AND RESTATEMENT OF STATE GEOTHERMAL RESOURCES LEASE NO. PRC 7621.0 UPON THE TERMS AND CONDITIONS OUTLINED IN THIS CALENDAR ITEM AND IN FORM ON FILE IN THE OFFICES OF THE COMMISSION, SAID AMENDMENT TO PROVIDE FOR: 1) THE LEASING UNDER THE TERMS OF LEASE NO. PRC 7621.0 OF AN ADDITIONAL 535 ACRES, MORE OR LESS, EXHIBIT A, ATTACHED; 2) APPROVAL OF THE CONVEYANCE OF UP TO SEVEN GEOTHERMAL EASEMENT INTERESTS IN THE LEASE TO THE ENTITIES IDENTIFIED IN THIS CALENDAR ITEM; 3) THE CONSENT OF THE COMMISSION TO THE FUTURE UNITIZATION OF THE LEASED LANDS IN ACCORDANCE WITH THE PROVISIONS OF THIS CALENDAR ITEM; AND 4) THE ENCUMBRANCING OF THE LESSEE'S INTEREST UNDER THE LEASE.

AUTHORIZE THE EXECUTIVE OFFICER OR HIS DESIGNEE TO EXECUTE ANY DOCUMENTS OR AGREEMENTS AND TAKE SUCH FURTHER ACTION AS MAY BE NECESSARY TO IMPLEMENT THE COMMISSION'S ACTION.

**EXHIBIT A**

PRC 7621.0

**LAND DESCRIPTION**

The following State-owned land located in the County of Imperial, State of California:

**LAND ORIGINALLY IN PRC 7621.0:**

The South Half of the Northwest Quarter of Section 26, Township 11 South, Range 13 East, San Bernardino Base and Meridian, containing 80 acres, more or less.

**ADDED LAND:**

PARCEL 1: The South Half of Section 23, Township 11 South, Range 13 East, San Bernardino Base and Meridian, containing 320 acres, more or less.

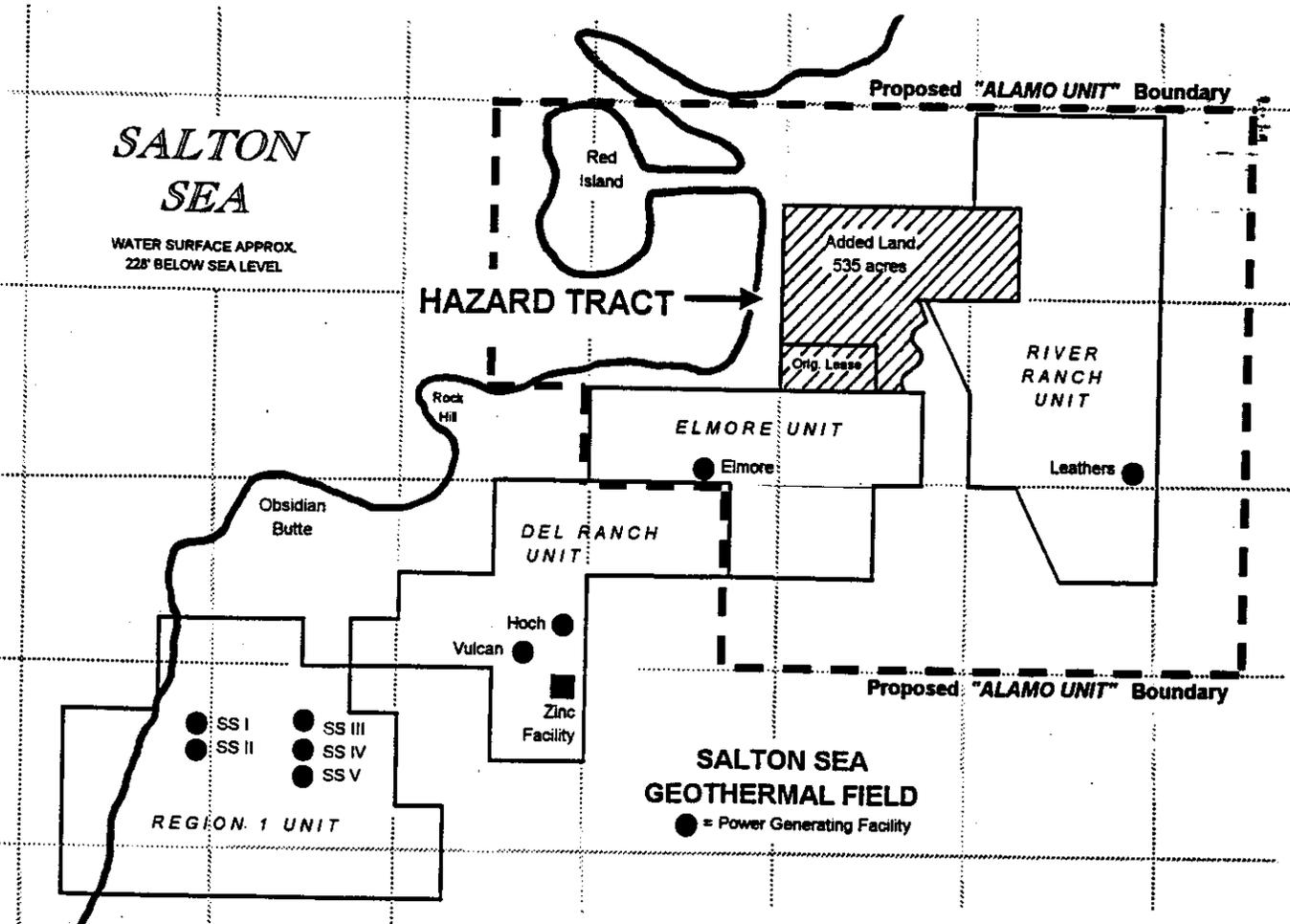
PARCEL 2: The North Half of the Northwest Quarter of Section 26, Township 11 South, Range 13 East, San Bernardino Base and Meridian, containing 80 acres, more or less.

PARCEL 3: That portion of the Northeast Quarter of Section 26, Township 11 South, Range 13 East, San Bernardino Base and Meridian, described as follows: Beginning at a point 52.1 feet East of the Northwest Corner thereof; thence South 0°01' East, 2640.0 feet to a point in the South line thereof which point is 52.1 feet East of the Southwest Corner of said Northeast Quarter; thence East 563.0 feet; thence North 20°42' West, 410.0 feet; thence North 13°55'30" East, 303.0 feet; thence North 65°36' East, 697.0 feet; thence North 19°10' West, 783.0 feet; thence North 314.8 feet; thence North 74°33'30" East, 665.0 feet; thence North 27°11' West, 498.0 feet to a point in the North Line of said Northeast Quarter; thence West 1282.8 feet to the point of beginning; containing 55 acres, more or less.

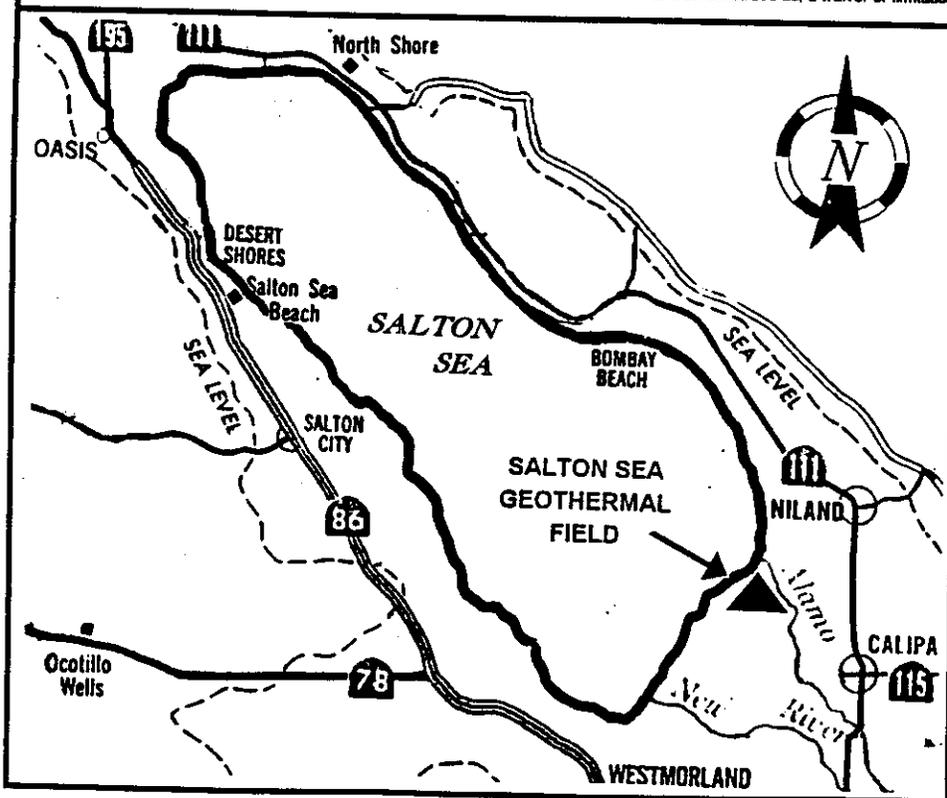
PARCEL 4: The West Half of the Southwest Quarter of Section 24, Township 11 South, Range 13 East, San Bernardino Base and Meridian, containing 80 acres, more or less.

**END OF DESCRIPTION**

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This Exhibit is solely for purposes of generally defining the lease premises and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.



**EXHIBIT B**  
**PRC 7621.0**  
**LOCATION MAP**  
**Salton Sea Geothermal Field**  
**IMPERIAL COUNTY**



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